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10/829,488	04/22/2004	Lanzhong Wang	100203738-1	6921

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EXAMINER
LOVEL, KIMBERLY M

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
Office Action Summary	10/829,488	WANG ET AL.
	Examiner	Art Unit	
	Kimberly Lovel	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 July 2007</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-25</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-25</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   This communication is in response to the Amendment filed 27 July 2007.

2.   Claims 1-25 are pending in the current application. In the Amendment filed 27

July 2007, none of the claims were amended. This action is made Final.

3.   The rejections of claims 1-4, 6-15, 17-19 and 21-25 as being unpatentable over

US Patent No 5,850,538 to Steinman in view of US PGPub 2005/0256890 to

Rajasekaran et al and Claims 5, 16 and 20 as being unpatentable over US Patent No

5,850,538 to Steinman in view of US PGPub 2005/0256890 to Rajasekaran et al and

further in view of US Patent No 6,901,207 to Watkins have been maintained.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

The rejections of **claims 21-25** under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter have been withdrawn as

necessitated by amendment.

4.   **Claims 1-5 and 17-20** are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter.

Claims 1 and 17 are rejected under 35 U.S.C. 101 because the claimed

invention is directed to non-statutory subject matter. The claims are directed toward "a

computer-readable medium" and are non-statutory because they encompass subject

matter and/or embodiments, which do not fall within a statutory category.

The meaning of "computer-readable medium" as disclose in the Specification, paragraph [0011], lines 10-13, covers non-statutory embodiments which improperly include network transmission lines (interpreted as wired and wireless transmission), wireless transmission media, signals propagating through space, radio waves, infrared signals, etc. Paragraph [0011], lines 10-13 of the specification provides evidence that applicant intends the medium to include signals as such the claim is drawn to a form of energy. Energy is not one of the four categories of invention and therefore the claims are not statutory. Energy is not a series of steps or acts and thus is not a process. Energy is not a physical article and as such is not a machine or manufacture. Energy is not combination of substances and therefore not a composition of matter.

Claims 2-5 and 18-20, which are dependent respectively on claims 4 and 18 fail to overcome the rejection and therefore are rejected on the same grounds as claims 4 and 18.

To expedite a complete examination of the instant application, the claims rejected under 35 U.S.C. 101 (nonstatutory) above are further rejected as set forth below in anticipation of applicant amending these claims to place them within the four statutory categories of invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

5.   **Claims 1-4, 6-15, 17-19 and 21-25 are rejected under 35 U.S.C. 103(a) as**

being unpatentable over US Patent No 5,850,538 to Steinman (hereafter Steinman)

in view of US PGPub 2005/0256890 to Rajasekaran et al (hereafter Rajasekaran).

        Referring to claim 1, Steinman discloses a data structure [queue data structure]

comprising:

        a sorted portion that contains a plurality of entries that are sorted into an order

[main priority queue] (see column 6, line 65 – column 7, line 4);

        an unsorted portion that contains a plurality of entries that have not been sorted

[temporary holding queue] (see column 6, line 65 – column 7, line 4); and

a boundary that separates the sorted portion and the unsorted portion [two separate lists] (see column 6, line 65 – column 7, line 9).

an entry is added to the unsorted portion [temporary queue] (see column 6, line 65 – column 7, line 9).

However, Steinman fails to explicitly disclose the further limitation wherein the sorted portion of the data structure is searchable with O(logN) performance. Rajasekaran discloses sorted lists, including the further limitation wherein the sorted portion [sorted list] of the data structure is searchable with O(logN) performance (see [0123]) in order to provide fast and efficient search techniques.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the concept of searching the sorted portion of the list using a binary search as disclosed by Rajasekaran while adding data entries to the unsorted portion as disclosed by Steinman. One would have been motivated to do so in order to provide fast and efficient search techniques (Rajasekaran: see [0004]).

Referring to claim 2, the combination of Steinman and Rajasekaran (hereafter Steinman/Rajasekaran) discloses the data structure of claim 1, wherein the sorted portion is searchable with a binary search [O(log N)] (Rajasekaran: see [0123]).

Referring to claim 3, Steinman/Rajasekaran discloses the data structure of claim 1, wherein the unsorted portion is searchable with an incremental search (Steinman: see column 9, lines 31-36).

Referring to claim 4, Steinman/Rajasekaran discloses the data structure of claim 1, wherein the data structure may be sorted to form a new sorted portion that

comprises the plurality of entries of the sorted portion [main priority queue] and the

plurality of entries of the unsorted portion [temporary holding queue], and the plurality of

entries of the new sorted portion are sorted into an order [temporary queue is sorted

and merged the main priority queue] (Steinman: see column 7, lines 1-18).

Referring to claim 6, Steinman discloses a method of using a container that

comprises a sorted portion [main priority queue] that contains a plurality of entries that

are sorted into an order, an unsorted portion that contains a plurality of entries that have

not been sorted [temporary holding queue], and a boundary that separates the sorted

portion and the unsorted portion [two separate lists] (see column 6, line 65 – column 7,

line 9), the method comprising:

receiving a search request that comprises a requested value (see column 6, line

65 – column 7, line 9);

searching the sorted portion of the container for the requested value with O(logN)

performance (see column 6, line 65 – column 7, line 9);

adding an entry to the unsorted portion [temporary queue] during the searching

(see column 7, lines 3-4);

and returning a stored value of the container if there is a match of the stored

value and the requested value (see column 6, line 65 – column 7, line 9).

However, Steinman fails to explicitly disclose the further limitation wherein the

sorted portion of the data structure may be searched with O(logN) performance.

Rajasekaran discloses sorted lists, including the further limitation wherein the sorted

portion [sorted list] of the data structure may be searched with O(logN) performance

(see [0123]) in order to provide fast and efficient search techniques.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to utilize the concept of searching the sorted portion of the list using a binary

search as disclosed by Rajasekaran while adding data entries to the unsorted portion as

disclosed by Steinman. One would have been motivated to do so in order to provide

fast and efficient search techniques (Rajasekaran: see [0004]).

Referring to claim 7, Steinman/Rajasekaran discloses the method of claim 6,

wherein when there is not a match, the method further comprises: returning a null value

that indicates that there is no match with the requested value (Steinman: see column 7,

lines 1-18).

Referring to claim 8, Steinman/Rajasekaran discloses the method of claim 6,

wherein when there is not a match, the method further comprises: adding an entry to

the unsorted portion corresponding to the search request (Steinman: see column 7,

lines 3-4).

Referring to claim 9, Steinman/Rajasekaran discloses the method of claim 6,

wherein when there is not a match, the method further comprises:

determining whether unsorted items in the container exceed a predetermined

threshold [the event horizon has been crossed] (Steinman: see column 7, lines 1-18);

performing a sort operation on the container, if the predetermined threshold is

exceeded, thereby forming a new sorted portion that comprises the plurality of entries of

the sorted portion [main priority queue] and the plurality of entries of the unsorted

portion [temporary holding queue], and the plurality of entries of the new sorted portion

are sorted into an order [temporary queue is sorted and merged with the main priority

queue] (Steinman: see column 7, lines 1-18).

Referring to claim 10, Steinman/Rajasekaran discloses the method of claim 9,

further comprises: searching the new sorted portion of the container for the requested

value; and returning a stored value of the container if there is a match of the stored

value and the requested value (Rajasekaran: see [0123]).

Referring to claim 11, Steinman/Rajasekaran discloses the method of claim 10,

wherein searching the new sorted portion comprises: searching with O(logN)

performance (Rajasekaran: see [0123]).

Referring to claim 12, Steinman/Rajasekaran discloses the method of claim 6,

wherein when there is not a match, the method further comprises: searching the

unsorted portion of the container for the requested value; and returning a stored value

of the container if there is a match of the stored value and the requested value

(Steinman: see column 9, lines 31-36).

Referring to claim 13, Steinman/Rajasekaran discloses the method of claim 12,

wherein the unsorted portion may be searched with an incremental search [O(n)]

(Steinman: see column 9, lines 31-34).

Referring to claim 14, Steinman/Rajasekaran discloses the method of claim 6,

wherein when there is not a match, the method further comprises: determining whether

a size of the unsorted portion is zero; adding an entry to the unsorted portion

corresponding to the search request if the unsorted portion is not zero (Steinman: see column 7, lines 1-18).

Referring to claim 15, Steinman/Rajasekaran discloses the method of claim 14, wherein the size of the unsorted portion is zero, the method further comprises: determining whether the requested value of the search request is greater than the value of the last entry of the sorted portion; adding an entry to the unsorted portion corresponding to the search request if the requested value of the search request is not greater than the value of the last entry of the sorted portion; adding an entry to the sorted portion corresponding to the search request if the requested value of the search request is greater than the value of the last entry of the sorted portion (Steinman: see column 7, lines 1-18).

Referring to claim 17, Steinman discloses a computer program product having a computer-readable medium having computer program logic recorded thereon for inserting a new value into a container that comprises a sorted portion [main priority queue] that contains a plurality of entries that are sorted into an order, an unsorted portion [temporary priority queue] that contains a plurality of entries that have not been sorted, and a boundary that separates the sorted portion and the unsorted portion (see column 9, lines 31-36), the computer program product comprising:

code for searching the sorted portion of the container for the new value with O(logN) performance (see column 6, line 65 – column 7, line 9 and column 9, lines 31-36);

code for searching the unsorted portion of the container if no match is found in the search of the sorted portion with O(N) performance (see column 9, lines 31-36); and

code for inserting the new value into the container if no match is found in the search of the unsorted portion (see column 6, line 65 – column 7, line 9).

However, Steinman fails to explicitly disclose the further limitation wherein the sorted portion of the data structure may be searched with O(logN) performance. Rajasekaran discloses sorted lists, including the further limitation wherein the sorted portion [sorted list] of the data structure may be searched with O(logN) performance (see [0123]) in order to provide fast and efficient search techniques.

It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the concept of searching the sorted portion of the list using a binary search as disclosed by Rajasekaran while adding data entries to the unsorted portion as disclosed by Steinman. One would have been motivated to do so in order to provide fast and efficient search techniques (Rajasekaran: see [0004]).

Referring to claim 18, Steinman/Rajasekaran discloses the computer program product of claim 17, wherein the code for inserting comprises: code for determining whether to insert the new value in the sorted portion or the unsorted portion of the container (Steinman: column 6, line 65 – column 7, line 9 and column 9, lines 31-36 and see column 9, lines 31-36).

Referring to claim 19, Steinman/Rajasekaran discloses the computer program product of claim 17, further comprises: code for sorting the unsorted portion and merging the sorted portion and the sorted unsorted portion into a new sorted portion,

wherein the code for sorting is operative when the unsorted portion exceeds a

predetermined criteria [the event horizon has been crossed] (Steinman: see column 7,

lines 1-18); and code for searching the new sorted portion of the container for the new

value with O(logN) performance (Rajasekaran: see [0123]).

Referring to claim 21, Steinman/Rajasekaran discloses a computer system for

managing data objects, comprising:

memory means for storing said data objects [main priority queue] (see column 6,

line 65 – column 7, line 4);

means for identifying a boundary within said memory means for storing, wherein

data objects stored in a first portion [main priority queue] of said memory means defined

by said boundary are stored in an ordered manner [sorted] and data objects stored in a

second portion [temporary holding queue] of said memory means defined by said

boundary are stored in an unordered manner [two separate queues] (see column 6, line

65 – column 7, line 4); and

means for searching said first portion according to O(logN) performance [O(log

N)] to locate an identified object (Steinman: see column 9, lines 31-36).

Referring to claim 22, Steinman/Rajasekaran discloses the computer system of

claim 21 further comprising: means for searching said second portion for said identified

object according to O(N) performance (Steinman: see column 9, lines 31-36).

Referring to claim 23, Steinman/Rajasekaran discloses the computer system of

claim 21 further comprising: means for adding said identified object to said second

portion when said means for searching said first portion and said means for searching

said second portion do not locate said identified object (Steinman: see column 7, lines

1-18).

Referring to claim 24, Steinman/Rajasekaran discloses the computer system of

claim 21 further comprising: means for merging data objects in said second portion

[temporary holding queue] into said first portion [main priority queue] in an ordered

manner; and means for resetting said boundary in response to said means for merging

(Steinman: see column 7, lines 1-18).

Referring to claim 25, Steinman/Rajasekaran discloses the computer system of

claim 24 wherein said means for merging is operable when a number of data objects in

said second portion reaches a predetermined amount [the event horizon has been

crossed] (Steinman: see column 7, lines 3-4).

6.   **Claims 5, 16 and 20 are rejected under 35 U.S.C. 103(a) as being**

unpatentable over US Patent No 5,850,538 to Steinman in view of US PGPub

2005/0256890 to Rajasekaran et al as applied to respectively to claims 1, 6 and 17

above, and further in view of US Patent No 6,901,207 to Watkins (hereafter

Watkins).

Referring to claim 5, Steinman/Rajasekaran discloses a data structure.

However, Steinman/Rajasekaran fails to explicitly disclose the further limitation wherein

the data structure is associated with an occurrence model used in designing a circuit.

Watkins discloses a data structure, including the further limitation of wherein the data

structure is associated with an occurrence model used in designing a circuit (Watkins:

see column 19, lines 50-57) so in order to improve the efficiency of designing the circuit.

It would have been obvious to one of ordinary skill in the art at the time of the

invention to utilize the data structure of Steinman/Rajasekaran with the occurrence

model of Watkins. One would have been motivated to do so in order to improve the

efficiency of designing the circuit.

Referring to claims 16 and 20, the claims are rejected on the same grounds as

claim 5.

Response to Arguments

7.   Applicant's arguments filed 27 July 2007 have been fully considered but they are

not persuasive.

8.   Referring to applicant's arguments on pages 7-9 of the Remarks concerning the

35 USC 101 rejection of claims 1-5 and 17-20, the applicant states: The Office Action

rejects claims 1-5 and 17-20 under the rationale that the claims can cover an

embodiment wherein the recited "computer readable medium" is a carrier wave or

signal, and thus energy. ... Moreover, the Office Action's focus on energy is simply

misplaced, as the Office Action offers no support in the statutes or case law for energy

under 35 USC 101. Nor is there any requirement that an invention not cover subject

matter in the realm of energy, waves, or signals. The proper focus is on whether the

invention falls under one of the categories of eligible subject matter. A correct reading

of claims 1-5 and 17-20 and of 35 USC 101 would lead one to realize such claims are directed at least to a manufacture.

The examiner agrees with the statement "The proper focus is on whether the invention falls under one of the categories of eligible subject matter." However, as stated above, the claimed subject matter fails to fall under one of the categories of eligible subject matter. According to the 2007 Federal Circuit decision of *In re* Nuitjen, the court found that a signal did not fit into any of the four statutory categories. Also, in response to applicant's argument that the claimed subject matter represents an article of manufacture, in the ruling the court limited a manufacture an "article" produced by man. According to the court, an "article" is not transient and cannot exist in a vacuum – both qualities of a signal. Thus, a signal is not a manufacture.

9.   Referring to applicant's arguments on page 10 of the Remarks in regards to claim 1, applicant states: More specifically, the Office Action cites column 6, line 65 – column 7, line 9 of Steinman as teaching this limitation. However, Steinman teaches using two separate queues a Q queue and a Qtemp queue. This arrangement does not have a boundary located between the two separate queues. In fact, since the two queues are separate, they do not need a boundary between them.

The examiner respectfully disagrees. The Examiner gave the broadest reasonable interpretation in light of the supporting disclosure.

According to MPEP 2106 [R-5] Patent Subject Matter Eligibility

USPTO personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. In re Morris, 127 F.3d 1048, 1054-55, 44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not recited in the claim should not be read into the claim. E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted "in view of the specification" without importing limitations from the specification into the claims unnecessarily). In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969). See also In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) ("During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow.... The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.... An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.").<Where an explicit definition is provided by the applicant for a term, that definition will control interpretation of the term as it is used in the claim. Toro Co. v. White Consolidated Industries Inc., 199 F.3d 1295, 1301, 53 USPQ2d 1065, 1069 (Fed. Cir. 1999) (meaning of words used in a claim is not construed in a "lexicographic vacuum, but in the context of the specification and drawings."). Any special meaning assigned to a term "must be sufficiently clear in the specification that any departure from common usage would be so understood by a person of experience in the field of the invention." Multiform Desiccants Inc. v. Medzam Ltd., 133 F.3d 1473, 1477, 45 USPQ2d 1429, 1432 (Fed. Cir. 1998).

The claim language does not specifically state that the sorted portion and the unsorted

portion are contained in the same data structure. Therefore, the concept of having the

sorted portion and the unsorted portion located in two separate queues does not

contradict the claim language. Also, if the portions are in two separate queues, they

inherently have a boundary between them.

10.   Referring to applicant's arguments on pages 10-11 of the Remarks in regards to

claims 1 and 6, applicant states: Rajasekaran does not teach that the sorted portion of

the data structure be searchable with O(logN) performance while an entry is added to

the unsorted portion.

        The examiner respectfully disagrees. Since the queues are two separate

queues, there are no interruptions to the unsorted queue while the sorted queue is

being searched. Therefore, the ability exists for the entry to be added to the unsorted

portion while the sorted portion is being searched.

11.   Referring to applicant's arguments on page 11 of the Remarks in regards to

claims 17, applicant states: Steinman does not teach code for searching the unsorted

portion of the container ...

        The examiner respectfully disagrees. In column 16, line 60 – column 17, line 3,

Steinman teaches searching the temporary heap until the item is found.

12.   Since the rejections of independent claims 1, 6, 17 and 21 are taught for the

reasons above, the rejections of dependent claims 2-5, 7-16, 18-20 and 22-25 are also

maintained.

Conclusion

13.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Lovel whose telephone number is (571) 272-2750. The examiner can normally be reached on 8:00 - 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kimberly Lovel
Examiner
Art Unit 2167

12 October 2007
kml

JOHN COTTINGHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100